

**A PREDICTIVE NETWORK  
WITH LEARNED PREPROCESSING PARAMETERS**

**ABSTRACT OF THE DISCLOSURE**

[0127] A method for building a model of a system includes first extracting data from a historical database (310). Once the data is extracted, a dataset is then created, which dataset involves the steps of preprocessing the data. This dataset is then utilized to build a model. The model is defined as a plurality of transforms which can be utilized to run an on-line model. This on-line model is interfaced with the historical database such that the variable names associated therewith can be downloaded to the historical database. This historical database can then be interfaced with a control system to either directly operate the plant or to provide an operator an interface to various predicted data about the plant. The building operation will create the transform list and then a configuration step is performed in order to configure the model to interface with the historical database. When the dataset was extracted, it is unknown whether the variables names are still valid. It is therefore necessary to read and write the various variables to the database to determine if they are in fact valid. Further, the predicted output values, which may not have been a part of the historical database, need to be verified. Once these are verified, then the on-line model can be created to generate the predicted value for transfer to the control system. During this period of time, the control system must be disabled.